

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) An adjusting device for adjusting imaging parameters ~~(I , V , L , f , Q_0)~~ of an X-ray apparatus ~~(1)~~, comprising:
 - ~~_____~~ a user interface ~~(6)~~, ~~by means of which adapted to~~, with the aid of a preliminary image, allow a user ~~may to~~ specify an image region of interest ~~(ROI)~~ and a visibility criterion ~~(CNR_{ref})~~ desired for this image region; and
 - ~~_____~~ a data processing device ~~(5)~~ arranged to carry out the following steps:
 - a) calculation of adjusted imaging parameters ~~(I , V , L , f , Q_0)~~ of the X-ray apparatus ~~(1)~~, by use of which the ~~predetermined~~ visibility criterion ~~(CNR_{ref})~~ is achieved for the given image region of interest (ROI); and
 - b) control of the X-ray apparatus ~~(1)~~ on the basis of the calculated, adjusted imaging parameters ~~(I , V , L , f , Q_0)~~;wherein the visibility criterion is the contrast-to-noise ratio of the image region of interest.
2. (currently amended) A device as claimed in claim 1, ~~characterized in that wherein~~ the data processing device ~~(5)~~ is arranged to determine, in a preliminary image, the current value of the visibility criterion ~~(C_m)~~ for a predetermined image region of interest (ROI).
3. (currently amended) A device as claimed in claim 1, ~~characterized in that wherein~~ the imaging parameters influence the dose ~~(Q_0)~~ per exposure, the intensity and/or the quality of the X-ray radiation generated with the X-ray apparatus ~~(1)~~.
4. (currently amended) A device as claimed in claim 3, ~~characterized in that wherein~~ the imaging parameters include the tube current ~~(I)~~, the tube voltage ~~(V)~~, the pulse length ~~(L)~~ and/or the setting values ~~(f)~~ of filter elements.

5. (cancelled).

6. (currently amended) A device as claimed in claim 1, ~~characterized in that~~ wherein, in a preliminary image, on the basis of at least one pixel ~~(A, 3)~~ predefined via the user interface ~~(6)~~, the data processing device ~~(5)~~ is arranged to segment an image region of interest ~~(ROI)~~.

7. (currently amended) A device as claimed in claim 1, ~~characterized in that~~ wherein the data processing device ~~(5)~~ is arranged to take account of the influence of image processing procedures, in particular noise filtration, when adjusted imaging parameters ~~(I, V, L, f, Q₀)~~ are calculated.

8. (currently amended) A device as claimed in claim 1, ~~characterized in that it~~ wherein the device includes a control module ~~(7)~~ for feedback control of imaging parameters ~~(I, V, L)~~ of the X-ray apparatus ~~(1)~~ during an X-ray image.

9. (currently amended) An adjusting device for adjusting imaging parameters of an X-ray apparatus comprising:

a user interface adapted to, with the aid of a preliminary image, allow a user to specify an image region of interest and a visibility criterion desired for an image region; and

a data processing device arranged to carry out the following steps:

a) calculation of adjusted imaging parameters of the X-ray apparatus, by use of which the predetermined visibility criterion is achieved for the given image region of interest; and

b) control of the X-ray apparatus on the basis of the calculated, adjusted imaging parameters. ~~A device as claimed in claim 1, characterized in that it~~

wherein the device includes means a detector for detecting changes in the imaging geometry and that the data processing device ~~(5)~~ is arranged to adjust the calculated imaging parameters ~~(I, V, L, f, Q₀)~~ in the case of a change in the imaging geometry such that the predetermined visibility criterion ~~(CNR_{ref})~~ is still achieved.

10. (currently amended) A method for adjusting imaging parameters ~~(I, V, L, f, Q₀)~~ of an X-ray apparatus ~~(1)~~, comprising the following steps:

- a) generation of a preliminary image with starting values for the imaging parameters;
- b) interactive stipulation of an image region of interest ~~(ROI)~~ and of a visibility criterion ~~(CNR_{ref})~~ desired for this image region;
- c) calculation of adjusted imaging parameters ~~(I, V, L, f, Q₀)~~ for the X-ray apparatus ~~(1)~~, during the use of which the predetermined visibility criterion ~~(CNR_{ref})~~ is achieved for the predetermined image region ~~(ROI)~~;
- d) control of the X-ray apparatus ~~(1)~~ based on the calculated, adjusted imaging parameters ~~(I, V, L, f, Q₀)~~.

11. (previously presented) X-ray apparatus having an adjusting device according to claim 1.

12. (new) A device as claimed in claim 5, wherein the data processing device is arranged to determine, in a preliminary image, the current value of the visibility criterion for a predetermined image region of interest.

13. (new) A device as claimed in claim 5, wherein the imaging parameters influence the dose per exposure, the intensity and/or the quality of the X-ray radiation generated with the X-ray apparatus.

14. (new) A device as claimed in claim 13, wherein the imaging parameters include the tube current, the tube voltage, the pulse length and/or the setting values of filter elements.

15. (new) A device as claimed in claim 5, wherein the device includes a control module for feedback control of imaging parameters of the X-ray apparatus during an X-ray image.

16. (new) A device as claimed in claim 5, wherein, in a preliminary image, on the basis of at least one pixel predefined via the user interface, the data processing device is arranged to segment an image region of interest.

17. (new) X-ray apparatus having an adjusting device according to claim 5.

18. (new) A device as claimed in claim 9, wherein the data processing device is arranged to determine, in a preliminary image, the current value of the visibility criterion for a predetermined image region of interest.

19. (new) A device as claimed in claim 9, wherein the imaging parameters influence the dose per exposure, the intensity and/or the quality of the X-ray radiation generated with the X-ray apparatus.

20. (new) X-ray apparatus having an adjusting device according to claim 9.